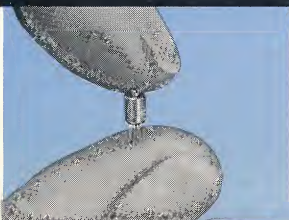




*tested at over 23,000 G's*

# **OAK MICROMINIATURE SWITCH**

ACTUAL  
SIZE



Type 1  
**.093**  
**6 pos.**

Type 2  
**.187**  
**6 pos.**

Type 3  
**.300**  
**10 pos.**



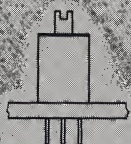
Type 1

ACTUAL  
SIZE

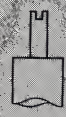
Type 2

ACTUAL  
SIZE

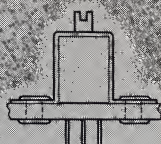
Type 3

ACTUAL  
SIZE

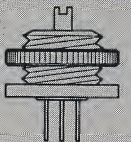
Free Standing



Extended



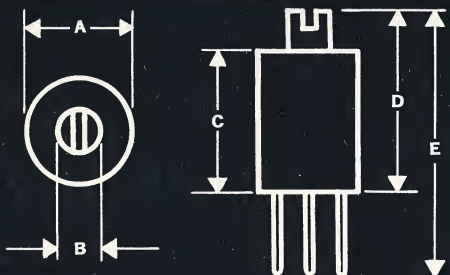
Strap Mounting

Threaded Body Mount  
Rear Insertion

Knurled &amp; Slotted



Shroud Knob



	A	B	C	D	E
Type 1	.093	.054	.145	.185	.250
Type 2	.187	.078	.268	.363	.550
Type 3	.300	.109	.406	.506	.671

Oak creative engineering continues to lead in switch design with the smallest switches ever developed. Now, for the first time, design engineers have a switch of the same magnitude as the discrete components on printed circuit boards. It is rugged—tested to more than 23,000 G's by an outside laboratory. Construction is unique but simple, requiring the assembly of only 5 basic parts to keep costs low. In PC Board applications, switching can be accomplished on the board—no necessity to run leads of the board to a standard size switch at some remote point and the small size allows for further miniaturization and weight savings in design work.

The switch stator has a center pin contact and 6 or more outer pin contacts molded in. A ball rotor attached to an activating shaft makes contact between the center pin and the desired outer pin. All pins extend through the stator and act as leads that can be dip soldered to a PC board. The Oak 0.093-in. switch is designed for direct welding to IC chips, as well as for potting. Because of simplicity of design that uses a ball, wires, and molded assembly, even further miniaturization is possible. Metal to metal detent mechanism (ball to two detent wires) provides a smooth "feel" and constant torque throughout the long switch life. The switch is actuated by an extended shaft or screwdriver slotted shaft.

#### Type

1-4 poles—six to thirteen positions or more as required.

#### Applications

Almost unlimited—from tiny helmet transmitters and artillery time-delay shells to any piece of electronic gear with integrated circuits and printed circuit boards.

#### Electrical Performance

Rating up to 1 amp at 28 v d-c; 0.75 amp at 120 v a-c non-inductive. **Breakdown voltage:** 500 v a-c between contacts and between contacts and ground; 250 v a-c at 70,000 ft. **Insulation resistance** 25,000 megohms between terminals and terminals to ground (particularly important in dry circuit applications).

#### Current Capacity

The .093-in. six position switch will carry 250 ma at 28 v d-c; 0.187-in. six position and the 0.300-in ten position switches will carry 750 ma at 28 v d-c.

#### Switch Life

Fully tested for 100,000 switching operations.

#### Shock

Tested to 23,000 G's in three separate planes.

#### Materials

Spring-tempered copper alloy and/or precious metals depending on application. An extremely high-pressure contact arrangement insures self-cleaning action and positive contact. Contacts may be shorting or non-short-ing.

#### Vibration

Conforms to MIL-S-3786.

#### Temperature

—65° to 85° C.

#### Salt Spray

Only non-corrosive materials used. Withstand military salt spray requirements.

#### Dielectric Material

Glass-filled diallyl phthalate conforming with MIL-M-14, latest issue; usable to temperatures of 85°C.

#### Lubrication

Enough lubricant is applied to both contacts and bearing surfaces for the normal life of the switch.

Oak Microminiature Switch, patent pending.

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OAK MANUFACTURING CO.

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CABLE ADDRESS: OAKMANCO



# OAK DISTRIBUTOR SWITCHES

## SWITCH COMPARISON NUMBER SHEET—APRIL, 1966

Total No. of Poles	No. of Positions	Poles Per Section	No. of Sections	Use This OAK Catalog Number When Ordering		Old OAK Number		Centralab Equivalent	
				Shorting	Non- Shorting	Shorting	Non- Shorting	Shorting	Non- Shorting

PAGE 3

1	2-12	1	1	399216-A	399217-A	399200-A	399201-A	PS-100	PS-101
2	2-6	2	1	399222-A	399223-A	399206-A	399207-A	PS-104	PS-105
2	2-12	1	2	399218-A	399219-A	399202-A	399203-A	PS-102	PS-103
3	2-12	1	3	399220-A	399221-A	399204-A	399205-A	PS-106	PS-107
4	2-6	2	2	399224-A	399225-A	399208-A	399209-A	PS-110	PS-111
4	2	4	1	399234-A	399235-A	399212-A	399213-A	PS-112	PS-113
6	2-6	2	3	399226-A	399227-A	399210-A	399211-A	PS-114	PS-115
8	2	4	2	399236-A	399237-A	399214-A	399215-A	PS-118	PS-119

PAGE 3

1	2-11	1	1	399322-F	399323-F	399300-F	399301-F	———	———
2	2-11	1	2	399324-F	399325-F	399302-F	399303-F	———	———
2	2-5	2	1	399326-F	399327-F	399304-F	399305-F	———	———
3	2-3	3	1	399330-F	399331-F	399308-F	399309-F	———	———
4	2-5	2	2	399328-F	399329-F	399306-F	399307-F	———	———
4	2	4	1	399334-F	399335-F	399312-F	399313-F	———	———
6	2-3	3	2	399332-F	399333-F	399310-F	399311-F	———	———
8	2	4	2	399336-F	399337-F	399314-F	399315-F	———	———

PAGE 3

1	2-11	1	1	399366-FC	399367-FC	399350-FC	399351-FC	PA-6000	PA-6001
2	2-11	1	2	399368-FC	399369-FC	399352-FC	399353-FC	PA-6004	PA-6005
2	2-5	2	1	399370-FC	399371-FC	399354-FC	399355-FC	PA-6002	PA-6003
3	2-3	3	1	399374-FC	399375-FC	399358-FC	399359-FC	PA-6006	PA-6007
4	2-5	2	2	399372-FC	399373-FC	399356-FC	399357-FC	PA-6012	PA-6013
4	2	4	1	399378-FC	399379-FC	399362-FC	399363-FC	PA-6010	PA-6011
6	2-3	3	2	399376-FC	399377-FC	399360-FC	399361-FC	PA-6018	PA-6019
8	2	4	2	399380-FC	399381-FC	399364-FC	399365-FC	PA-6024	PA-6025

PAGE 3

1	2-12	1	1	399418-K	399419-K	399400-K	399401-K	PA-1000	PA-1001
2	2-12	1	2	399420-K	399421-K	399402-K	399403-K	PA-1004	PA-1005
2	2-6	2	1	399426-K	399427-K	399408-K	399409-K	PA-1002	PA-1003
3	2-12	1	3	399422-K	399423-K	399404-K	399405-K	PA-1008	PA-1009
4	2-12	1	4	399424-K	399425-K	399406-K	399407-K	PA-1014	PA-1015
4	2-6	2	2	399428-K	399429-K	399410-K	399411-K	PA-1012	PA-1013
5	2-11	1	5	399732-K	399733-K	———	———	PA-1016	PA-1017
6	2-11	1	6	399736-K	399737-K	———	———	PA-1022	PA-1023
6	2-6	2	3	399430-K	399431-K	399412-K	399413-K	PA-1020	PA-1021
6	2-3	3	2	399734-K	399735-K	———	———	PA-1018	PA-1019
6	2	6	1	399432-K	399433-K	399414-K	399415-K	PA-1010	PA-1011
8	2-5	2	4	399738-K	399739-K	———	———	PA-1026	PA-1027
10	2-5	2	5	399742-K	399743-K	———	———	PA-1030	PA-1031
12	2-5	2	6	399744-K	399745-K	———	———	PA-1032	PA-1033
12	2	6	2	399434-K	399435-K	399416-K	399417-K	PA-1024	PA-1025
12	2	4	3	399740-K	399741-K	———	———	PA-1028	PA-1029
3	2-5	3	1	399490-K	399491-K	———	———	PA-1006	PA-1007
6	2-5	3	2	399492-K	399493-K	———	———	PA-1018	PA-1019
9	2-5	3	3	399494-K*	399495-K*	———	———	PA-2028(C)	PA-2029(C)

\*Indicates Available in Phenolic only; Competitive Item is Ceramic

# OAK DISTRIBUTOR SWITCHES

Total No. of Poles	No. of Positions	Poles Per Section	No. of Sections	Use This OAK Catalog Number When Ordering		Old OAK Number		Centralab Equivalent	
				Shorting	Non- Shorting	Shorting	Non- Shorting	Shorting	Non- Shorting

PAGE 3

1	2-12	1	1	399468-JC	399469-JC	399450-JC	399451-JC	PA-2000	PA-2001
2	2-12	1	2	399470-JC	399471-JC	399452-JC	399453-JC	PA-2004	PA-2005
2	2-6	2	1	399476-JC	399477-JC	399458-JC	399459-JC	PA-2002	PA-2003
3	2-12	1	3	399472-JC	399473-JC	399454-JC	399455-JC	PA-2008	PA-2009
3	2-5	3	1	399704-JC	399705-JC	————	————	PA-2006	PA-2007
4	2-12	1	4	399474-JC	399475-JC	399456-JC	399457-JC	PA-2012	PA-2013
4	2-6	2	2	399478-JC	399479-JC	399460-JC	399461-JC	PA-2010	PA-2011
6	2-6	2	3	399480-JC	399481-JC	399462-JC	399463-JC	PA-2022	PA-2023
6	2	6	1	399484-JC	399485-JC	399464-JC	399465-JC	PA-2018	PA-2019
6	2-5	3	2	399696-JC	399697-JC	————	————	PA-2020	PA-2021
8	2-5	2	4	399698-JC	399699-JC	————	————	PA-2026	PA-2027
8	2-6	2	4	399706-JC	399707-JC	————	————	PA-2026	PA-2027
9	2-5	3	3	399708-JC	399709-JC	————	————	PA-2028	PA-2029
10	2-6	2	5	399712-JC	399713-JC	————	————	PA-2032	PA-2033
10	2-3	5	2	399710-JC	399711-JC	————	————	PA-2030	PA-2031
12	2-6	2	6	399714-JC	399715-JC	————	————	PA-2036	PA-2037
12	2	6	2	399486-JC	399487-JC	399466-JC	399467-JC	PA-2034	PA-2035
15	2-3	5	3	399716-JC	399717-JC	————	————	PA-2038	PA-2039
18	2	6	3	399718-JC	399719-JC	————	————	PA-2040	PA-2041

PAGE 3

1	2-11	1	1	399512-H	399513-H	399500-DH	399501-DH	1402	1403
2	2-11	1	2	399514-H	399515-H	399502-DH	399503-DH	1412	1413
2	2-5	2	1	399518-H	399519-H	399506-DH	399507-DH	1404	1405
3	2-11	1	3	399516-H	399517-H	399504-DH	399505-DH	1422	1423
4	2-11	1	4	————	399529-H	————	————	————	1429
4	2-5	2	2	399520-H	399521-H	399508-DH	399509-DH	1414	1415
4	2	4	1	————	399525-H	————	————	————	1409
6	2-5	2	3	399522-H	399523-H	399510-DH	399511-DH	1424	1425
6	2-3	3	2	————	399527-H	————	————	————	1417

PAGE 3

1	2-11	1	1	399562-HC	399563-HC	399550-DHC	399551-DHC	2502	2503
1	2-6	1	1	399574-HC	————	————	————	2500	————
2	2-11	1	2	399564-HC	399565-HC	399552-DHC	399553-DHC	2512	2513
2	2-5	2	1	399568-HC	399569-HC	399556-DHC	399557-DHC	2504	2505
3	2-11	1	3	399566-HC	399567-HC	399554-DHC	399555-DHC	2522	2523
4	2-5	2	2	399570-HC	399571-HC	399558-DHC	399559-DHC	2514	2515
6	2-5	2	3	399572-HC	399573-HC	399560-DHC	399561-DHC	2524	2525

PAGE 3

1	2-17	1	1	399608-L	399609-L	399600-DL	399601-DL	PA-3000	PA-3001
2	2-17	1	2	399610-L	399611-L	399602-DL	399603-DL	PA-3002	PA-3003
3	2-17	1	3	399612-L	399613-L	399604-DL	399605-DL	PA-3004	PA-3005
4	2-17	1	4	399614-L	399615-L	399606-DL	399607-DL	PA-3006	PA-3007

PAGE 3

1	2-23	1	1	399658-MF	399659-MF	399650-MF	399651-MF	PA-4000	PA-4001
2	2-23	1	2	399660-MF	399661-MF	399652-MF	399653-MF	PA-4002	PA-4003
3	2-23	1	3	399662-MF	399663-MF	399654-MF	399655-MF	PA-4004	PA-4005
4	2-23	1	4	399664-MF	399665-MF	399656-MF	399657-MF	PA-4006	PA-4007



# GENERAL PURPOSE SWITCHES

Total No. of Poles	No. of Positions	Poles Per Section	No. of Sections	Use This OAK Catalog Number When Ordering		Old OAK Number		Centralab Equivalent	
				Shorting	Non-Shorting	Shorting	Non-Shorting	Shorting	Non-Shorting

## STANDARD ROTATION CONSECUTIVE SHORTING

PAGE 5

1	2-10	1	1	399722-JC	_____	_____	_____	PA-2042	_____
---	------	---	---	-----------	-------	-------	-------	---------	-------

1	2-10	1	1	399748-K	_____	_____	_____	PA-1040	_____
---	------	---	---	----------	-------	-------	-------	---------	-------

## OPPOSITE ROTATION CONSECUTIVE SHORTING

PAGE 5

1	2-10	1	1	399720-JC	_____	_____	_____	PA-2052	_____
---	------	---	---	-----------	-------	-------	-------	---------	-------

1	2-10	1	1	399746-K	_____	_____	_____	PA-1034	_____
---	------	---	---	----------	-------	-------	-------	---------	-------

## 60° SWITCHES

PAGE 5

### 60° INDEXING SWITCHES (Ceramic)

1	2-6	1	1	_____	399729-JC	_____	_____	_____	PA-2043
2	2-6	1	2	_____	399731-JC	_____	_____	_____	PA-2045

### 60° INDEXING SWITCHES (Phenolic)

1	2-6	1	1	_____	399747-K	_____	_____	_____	PA-1035
2	2-6	1	2	_____	399749-K	_____	_____	_____	PA-1037

### 60° HAM SWITCHES

3	2-6	1	3	_____	399581-HC	_____	_____	_____	2552
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## OAK 20 SERIES SWITCHES

PAGE 8

No. of Poles	No. of Positions	Type of Indexing	Use This OAK Catalog Number When Ordering		Old OAK Number		Centralab Equivalent	
			Shorting	Non-Shorting	Shorting	Non-Shorting	Shorting	Non-Shorting
1	2	Positive	399190-23	_____	_____	_____	1460	_____
1	3	Positive	399192-27	_____	_____	_____	1461	_____
2	2	Positive	399194-22	_____	_____	_____	1462	_____
2	2	Spring Return	_____	399197-22	_____	_____	_____	1463
2	3	Positive	399198-28	_____	_____	_____	1486	_____
1	4	Positive	399196-29	399195-29	_____	_____	_____	_____
2	3	Spring Return to Center	399188-28	399189-28	_____	_____	_____	_____

## LEVER SWITCHES

PAGE 8

2	3	Positive	399160-189	399161-189	_____	_____	1452	1454
5	3	Positive	399162-184	399163-184	_____	_____	_____	_____
6	2	Positive	399164-184	399165-184	_____	_____	_____	_____



## OAK MANUFACTURING CO.

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cem file 5100

27th in a series

electronic products



selection  
checklist

## Rotary Switches

By R. R. Gustafson  
*Oak Manufacturing  
Crystal Lake, Ill.*

AT FIRST GLANCE, it appears that "A switch is a switch," but a closer look at the problems involved reveals that this is by no means the case.

An important consideration in a piece of quality industrial or instrument equipment is its appearance. Hence, the recommendations of the human engineering and/or industrial stylists group must be considered so that the switch blends into an efficient and well-appearing piece of electrical equipment.

The second factor to consider is available space. Too often, the engineer designs his package allowing space for all other components and leaves the remaining space for his switch requirements.

And third, the design engineer must consider cost. If a specific instrument is to be sold at a certain price, the components in it must be appropriately priced.

After the switch style has been selected, general requirements are considered. Reviewing the following checklist will aid in examining the necessary specifications for rotary switches.

- ☐ Is the front shaft length correct for the actuator being used?
- ☐ Remember panel thickness when specifying the switch you need.

☐ Specify a flat, knurl or slot for the style actuator selected. In dimensioning the flat, knurl or slot, was space allowed for the shaft-retaining washer in front of the bushing? Concentric shafts? Indicate diameters.

☐ Can operator tell at a glance or by feel how switch is positioned?

☐ Is locating or positioning lug required? If so, is location of lug correct for proper positioning of switch behind panel? Remember, it is often much easier to change positioning hole in panel to suit lug location that manufacturer is able to provide.

☐ Any special mounting hardware needed?

☐ Is rotation of switch continuous, or are stops required at both ends of rotation?

☐ What index angle is required? For example, 30° or 60°. This is important if panel the switch will be mounted on is imprinted.

☐ Will indexing mechanism with adjustable stops be required?

☐ Does switch have a positive feel as it "locks" into each step?

☐ Is rotational torque specified correctly for the activator size?

(For example, a torque of 60 inch-ounces should not be specified if the actuator being used is only a ½ inch in diameter knob, nor should a torque of 15 inch-ounces be indicated for a 3 inch diameter knob.)

☐ Is spacing between switch sections sufficient to prevent interference of contacts facing each other?

☐ Is airgap sufficient to prevent dielectric breakdown at "x" volts?

☐ Staked construction or bolt construction? (Staking is more economical.)

☐ Are shields required between any of the switch sections? If any special non-symmetrical shields are required, show proper orientation.

☐ Will the switch give a low noise-to-signal ratio? Is it located near a transformer, etc.?

☐ Is shaft extension required at rear of switch? If so, indicate length.

☐ If switch is longer than 3½ inches or includes more than 5 sections, has provision been made for supporting switch at rear?

☐ How many contacts per pole?

☐ Specify the required contact arrangement.

☐ Should contacts be shorting (make-before-break) or non-shorting (break-before-make)?

(Continued)

## Checklist *(Continued)*

- ☐ What current-carrying capacity is required?
- ☐ What is the current-voltage breaking capability requirement?
- ☐ Is contact material specified correct for the load-life requirements of the switch?

Silver plated brass contacts will provide silver to silver contact for approximately 10,000 cycles. Silver alloy contacts will provide silver to silver contact in excess of 200,000 cycles.

- ☐ Is a switch with printed-circuit lugs needed?
- ☐ Is the insulating material chosen adequate for the application?
- ☐ Are unnecessary jumper wires avoided by taking advantage of available rotor blade shapes?
- ☐ Specify military requirements if necessary. Remember MIL-S-3786 is the specification written for rotary switches. Other military spec's may not be

applicable.

The following are typical values of insulation resistance in megohms as measured between adjacent contacts on switch stators of materials shown after 72 hours exposure to 95% R. H. at 50°C.

	Phenolic	Silicone Fiberglass	Ceramic	Mycalex	Kel-F	Diallyl Phthalate
Insulation Resistance	1,000	1,000,000	1,500,000	75,000	1,250,000	1,000,000
Relative Cost	1.00	2.40	1.62	2.12	2.26	1.39

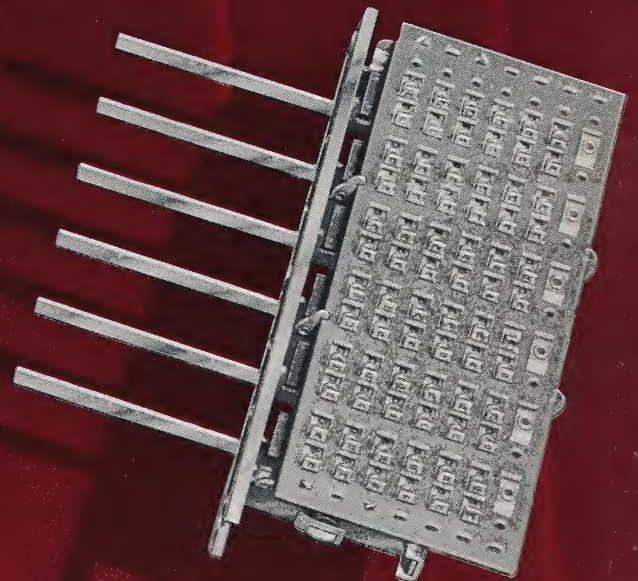
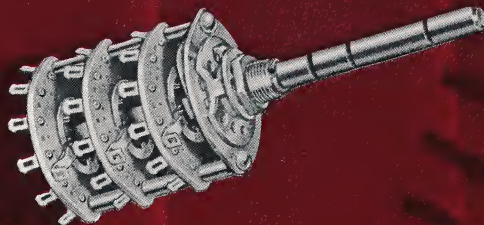
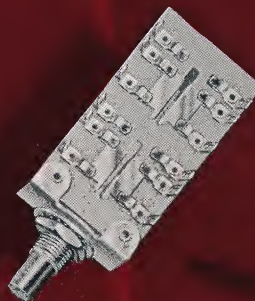
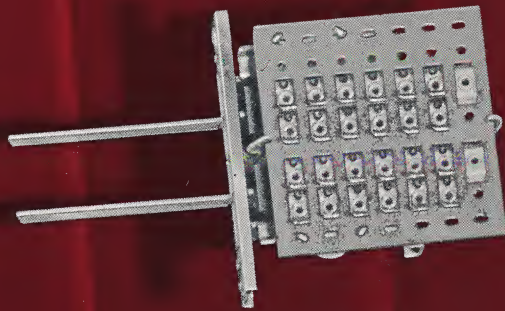
- ☐ Consider special applications requiring Underwriter's approval.
- ☐ For continuously rotating sequencing switches, what is accuracy of switch segments in degrees of minutes?
- ☐ Do special environmental restrictions apply?





DISTRIBUTOR

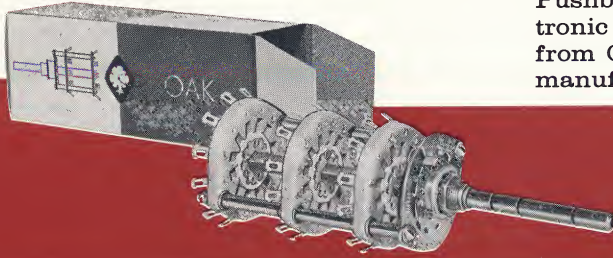
# SWITCHES







# OAK<sup>®</sup> ROTARY SWITCHES



OAK offers the broadest line of low-power Rotary, Pushbutton, Lever and Slide switches in the electronic industry. All are OEM-preferred types selected from Oak's more than 35 years of custom switch manufacturing.

For fast off-the-shelf delivery, make your selection from the hundreds of types shown in these pages.

## SPECIFICATIONS APPLICABLE TO PAGES 2 THRU 6

The following specifications only apply to the Rotary Switches found on the above listed pages.

**FINISHES** — Type A 200-hour salt spray; parts, are nickel-plated brass and stainless steel. All other 50-hour salt spray types, steel and brass parts are cadmium plated and chromate dipped. In addition there are special 200-hour salt spray types.

**INSULATION** — Phenolic: PBE-P per MIL-P-3115. Steatite: L4B per JAN-1-10. Silicone Fiberglass: GSG per MIL-P-997. Also KEL-F.

**DETENTS** — Ball-type indexing; one fixed and one adjustable stop per switch.

**SHAFTS** — Cadmium-plated steel shafts, 2 $\frac{3}{8}$ " long. Grooved for break-off at  $\frac{3}{4}$ ", 1 $\frac{1}{8}$ ", and 1 $\frac{7}{8}$ ".

**CONTACTS** — Brass-silver plated contacts with additional gold plating of 30 millionths, to offer the best shelf life and solderability. Oak pioneered double-wiping self cleaning contacts are used throughout.

**ELECTRICAL** — Break 1 amp. at 28VDC or 0.5 amp. at 110 VAC, resistive. Carry 5 amps.

**HARDWARE** —  $\frac{3}{8}$ -32 Mounting nuts and lock-washers supplied. Knobs are not included.

**PACKAGING** — All switches are protected from tarnish and corrosion by the unique Oakote protective packaging that assures long shelf life.

## FOR FAST SERVICE

### ORDER BY CATALOG NUMBER

To avoid unnecessary delay, please use Oak Distributor switch order numbers even if you also use your own part number. On your order, please specify (1) quantity, (2) Oak Catalog number (example: 399322-F — not "type F"), and (3) the method of shipping desired.

## SPECIFICATIONS APPLICABLE TO PAGES 7 AND 8

These specifications apply only to the Pushbutton, Lever, and Slide switches found on pages 7 and 8.

**FINISHES** — All steel or zinc and brass parts, except contact materials, are cadmium plated and clear iridite to supply a maximum protection against commercial environmental conditions. All plungers, levers and shafts except on the Type 175 are steel or zinc cadmium plated and clear iridite. Type 175 Pushbutton is brass chromium plated.

**INSULATION** — Types 175, 189, 20 and 200 Series Switches use Phenolic per MIL-P-3115 Grade PBE-P for stator and rotor or slider materials. Type 184 Lever Switch stator insulation is Diallyl Phthalate per MIL-M-

14: Rotor is Phenolic per MIL-P-3115 Grade PBE-P.

**CONTACTS** — Brass-silver plated contacts with additional gold plating of 30 millionths, to offer the best shelf life and solderability. Oak pioneered double-wiping self cleaning contacts are used throughout.

**HARDWARE** —  $\frac{3}{8}$ -32 Mounting nuts and lock-washers supplied with type 175 and 20 series switches. Knobs supplied with Type 189 and 184 Lever Switches.

**ELECTRICAL** — Break 1 amp. at 28 VDC or 0.5 amp. at 110 VAC, resistive. Carry 5 amps.

**PACKAGING** — All switches are protected from tarnish and corrosion by the unique Oakote protective packaging that assures long shelf life.

## COMPLETELY ASSEMBLED SPECIAL 200-HOUR SALT SPRAY REQUIREMENT TYPES

These switches have SILVER ALLOY contacts, with thirty-millionths thick gold plating. All frame materials are stainless steel or nickel plated brass. All stainless parts are passivated.

TYPE SWITCH "A"

Total No. of Poles	No. of Positions	Poles Per Section	No. of Sections	Catalog No.	
				Shorting	Non-Shorting
1	2-12	1	1	399240-A	399241-A

TYPE SWITCH "F"

1	2-11	1	1	399338-F	399339-F
---	------	---	---	----------	----------

TYPE SWITCH "FC"

1	2-11	1	1	399382-FC	399383-FC
---	------	---	---	-----------	-----------

TYPE SWITCH "JC"

2	2-12	1	2	399724-JC	399725-JC
---	------	---	---	-----------	-----------



# COMPLETELY ASSEMBLED SWITCHES



All switches meet MILITARY salt spray requirements as indicated below.

**TYPE SWITCH "A" (200-HOUR SALT SPRAY)**

Total No. of Poles	No. of Positions	Poles Per Section	No. of Sections	Catalog No.	
				Shorting	Non-Shorting
1	2-12	1	1	399216-A	399217-A
2	2-6	2	1	399222-A	399223-A
2	2-12	1	2	399218-A	399219-A
3	2-12	1	3	399220-A	399221-A
4	2-6	2	2	399224-A	399225-A
4	2	1	1	399234-A	399235-A
6	2-6	2	3	399226-A	399227-A
8	2	4	2	399236-A	399237-A

**TYPE SWITCH "JC" (50-HOUR SALT SPRAY)**

Total No. of Poles	No. of Positions	Poles Per Section	No. of Sections	Catalog No.	
				Shorting	Non-Shorting
1	2-12	1	1	399468-JC	399469-JC
2	2-12	1	2	399470-JC	399471-JC
2	2-6	2	1	399476-JC	399477-JC
3	2-12	1	3	399472-JC	399473-JC
3	2-5	3	1	399704-JC	399705-JC
4	2-12	1	4	399474-JC	399475-JC
4	2-6	2	2	399478-JC	399479-JC
6	2-5	3	2	399696-JC	399697-JC
6	2-6	2	3	399480-JC	399481-JC
6	2	6	1	399484-JC	399485-JC
8	2-5	2	4	399698-JC	399699-JC
8	2-6	2	4	399706-JC	399707-JC
9	2-5	3	3	399708-JC	399709-JC
10	2-6	2	5	399712-JC	399713-JC
10	2-3	5	2	399710-JC	399711-JC
12	2-6	2	6	399714-JC	399715-JC
12	2	6	2	399486-JC	399487-JC
15	2-3	5	3	399716-JC	399717-JC
18	2	6	3	399718-JC	399719-JC

**TYPE SWITCH "F" (50-HOUR SALT SPRAY)**

Total No. of Poles	No. of Positions	Poles Per Section	No. of Sections	Catalog No.	
				Shorting	Non-Shorting
1	2-11	1	1	399322-F	399323-F
2	2-11	1	2	399324-F	399325-F
2	2-5	2	1	399326-F	399327-F
3	2-3	3	1	399330-F	399331-F
4	2-5	2	2	399328-F	399329-F
4	2	4	1	399334-F	399335-F
6	2-3	3	2	399332-F	399333-F
8	2	4	2	399336-F	399337-F

**TYPE SWITCH "FC" (50-HOUR SALT SPRAY)**

Total No. of Poles	No. of Positions	Poles Per Section	No. of Sections	Catalog No.	
				Shorting	Non-Shorting
1	2-11	1	1	399366-FC	399367-FC
2	2-11	1	2	399368-FC	399369-FC
2	2-5	2	1	399370-FC	399371-FC
3	2-3	3	1	399374-FC	399375-FC
4	2-5	2	2	399372-FC	399373-FC
4	2	4	1	399378-FC	399379-FC
6	2-3	3	2	399376-FC	399377-FC
8	2	4	2	399380-FC	399381-FC

**TYPE SWITCH "H" (50-HOUR SALT SPRAY)**

Total No. of Poles	No. of Positions	Poles Per Section	No. of Sections	Catalog No.	
				Shorting	Non-Shorting
1	2-11	1	1	399512-H	399513-H
2	2-11	1	2	399514-H	399515-H
2	2-5	2	1	399518-H	399519-H
3	2-11	1	3	399516-H	399517-H
4	2	4	1	—	399525-H
4	2-11	1	4	—	399529-H
4	2-5	2	2	399520-H	399521-H
6	2-3	3	2	—	399527-H
6	2-5	2	3	399522-H	399523-H

**TYPE SWITCH "K" (50-HOUR SALT SPRAY)**

Total No. of Poles	No. of Positions	Poles Per Section	No. of Sections	Catalog No.	
				Shorting	Non-Shorting
1	2-12	1	1	399418-K	399419-K
2	2-12	1	2	399420-K	399421-K
2	2-6	2	1	399426-K	399427-K
3	2-5	3	1	399490-K	399491-K
3	2-12	1	3	399422-K	399423-K
4	2-12	1	4	399424-K	399425-K
4	2-6	2	2	399428-K	399429-K
5	2-11	1	5	399732-K	399733-K
6	2-11	1	6	399736-K	399737-K
6	2-5	3	2	399492-K	399493-K
6	2-6	2	3	399430-K	399431-K
6	2-3	3	2	399734-K	399735-K
6	2	6	1	399432-K	399433-K
8	2-5	2	4	399738-K	399739-K
9	2-5	3	3	399494-K	399495-K
10	2-5	2	5	399742-K	399743-K
12	2-5	2	6	399744-K	399745-K
12	2	6	2	399434-K	399435-K
12	2	4	3	399740-K	399741-K

**TYPE SWITCH "HC" (50-HOUR SALT SPRAY)**

Total No. of Poles	No. of Positions	Poles Per Section	No. of Sections	Catalog No.	
				Shorting	Non-Shorting
1	2-11	1	1	399562-HC	399563-HC
1	2-6	1	1	399574-HC	—
2	2-11	1	2	399564-HC	399565-HC
2	2-5	2	1	399568-HC	399569-HC
3	2-11	1	3	399566-HC	399567-HC
4	2-5	2	2	399570-HC	399571-HC
6	2-5	2	3	399572-HC	399573-HC

**TYPE SWITCH "L" (50-HOUR SALT SPRAY)**

Total No. of Poles	No. of Positions	Poles Per Section	No. of Sections	Catalog No.	
				Shorting	Non-Shorting
1	2-17	1	1	399608-L	399609-L
2	2-17	1	2	399610-L	399611-L
3	2-17	1	3	399612-L	399613-L
4	2-17	1	4	399614-L	399615-L

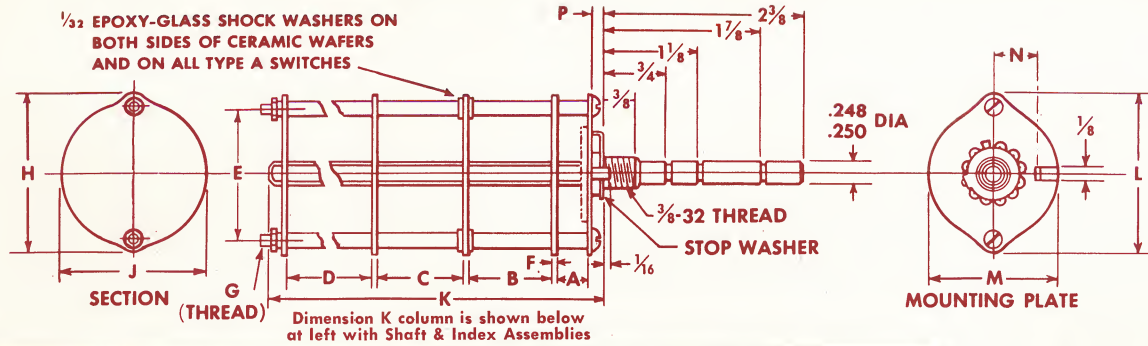
**TYPE SWITCH "MF" (50-HOUR SALT SPRAY)**

Total No. of Poles	No. of Positions	Poles Per Section	No. of Sections	Catalog No.	
				Shorting	Non-Shorting
1	2-23	1	1	399658-MF	399659-MF
2	2-23	1	2	399660-MF	399661-MF
3	2-23	1	3	399662-MF	399663-MF
4	2-23	1	4	399664-MF	399665-MF





# DIMENSIONS



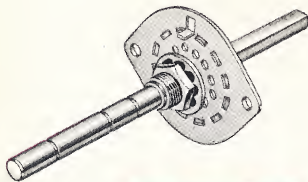
Switch Type	Dimensions, Inches													Insulation	
	A	B	C	D	E	F	G	H	J	L	M	N	P	Stator	Rotor
A	1 1/4	3/32	3/32		1 1/8	.062	2-56	1	1 1/8	1	1 1/8	3/8	.071	Silicone Glass	Kel-F
F	5/16	3/8			1 1/32	.062	4-40	1 1/8	1 1/32	1 1/4	1 1/4	1 1/32	3/32	Phenolic	Phenolic
FC	5/16	3/8			1 1/32	.125	4-40	1 1/8	1 1/4	1 1/4	1 1/4	1 1/32	3/32	Ceramic	Ceramic
K	3/8	1/2	1/2	1/2 *	1 1/4	.062	4-40	1 1/32	1 1/32	1 1/32	1 1/8	1/8	1/8	Phenolic	Phenolic
JC	3/8	1/8	1 1/32	1 1/32 *	1 1/4	.125	4-40	1 1/32	1 1/8	1 1/32	1 1/8	1/8	1/8	Ceramic	Ceramic
H	1/2	1/2			1 1/8	.062	5-40	1 1/8	1 1/32	1 1/8	1 1/8	1 1/32	1/8	Phenolic	Phenolic
H	1/2	1	1	1	1 1/8	.062	5-40	1 1/8	1 1/32	1 1/8	1 1/8	1 1/32	1/8	Phenolic	Phenolic
HC	1/2	1/8			1 1/8	.180	5-40	1 1/8	1 1/8	1 1/8	1 1/8	1 1/32	1/8	Ceramic	Ceramic
HC	1/2	1 1/8	1		1 1/8	.180	5-40	1 1/8	1 1/8	1 1/8	1 1/8	1 1/32	1/8	Ceramic	Ceramic
L	1/2	1/2	1/2	1/2	2	.078	5-40	2 1/8	1 1/32	2 1/8	1 1/32	1 1/32	1/8	Phenolic	Phenolic
MF	1/2	1/2	1/2	1/2	2	.062	5-40	2 1/8	1 1/4	2 1/8	1 1/32	1 1/32	1/8	Phenolic	Phenolic

† Locating key on types L and MF is on the adjustable stop washer and will appear 180° from stop end of washer.

In type A switches, all spacers are ceramic except dimension "A" which consists of a No. 399901-007 metal spacer and a No. 399907-001 washer, adjacent to stator.

\* The fifth and sixth section spacing for the Type K switch is 1/2": Type JC switch is 1 1/32".

## SHAFT & INDEX ASSEMBLIES



Includes mounting nut and lockwasher, stop washer, assembly tie rods and associated spacers, washers, nuts

TYPE	POSITIONS	DIM K	STOCK NUMBER
A	2 to 12	6 3/64	399029-A
A	2 to 12	4 1 1/32	399022-A
F, FC	2 to 12	1 1/4	399039-F
F, FC	2 to 12	6 1/8	399021-F
K, JC	2 to 12	2 1 1/32	399043-K
K, JC	2 to 12	6 1/8	399024-K
H, HC	2 to 12	3 3/32	399785-H
H, HC	2 to 12	6 1/8	399023-H
L	2 to 18	2 1 1/32	399789-L
L	2 to 18	6 1/8	399025-L
MF	2 to 24	2 1 1/32	399793-MF
MF	2 to 24	6 1/8	399026-MF

See diagram and table above.

## SECTIONS \*

STOCK NUMBER

Type	Poles	Active Positions	Shorting	Non-Shorting
A	1	2 to 12	399032-A	399033-A
	2	2 to 6	399034-A	399035-A
	4	2	399036-A	399037-A
	†	1	399058-A	-----
F	1	2 to 11	399070-F	399071-F
	2	2 to 5	399072-F	399073-F
	3	2 to 3	399074-F	399075-F
	4	2	399076-F	399077-F
†	1	2 to 11	399060-F	-----
FC	1	2 to 11	399090-FC	399091-FC
	2	2 to 5	399092-FC	399093-FC
	3	2 to 3	399094-FC	399095-FC
	4	2	399096-FC	399097-FC
†	1	2 to 11	399062-FC	-----
K	1	2 to 12	399130-K	399131-K
	1	2 to 11	399242-K	399243-K
	2	2 to 6	399132-K	399133-K
	2	2 to 5	399244-K	399245-K
	3	2 to 3	399246-K	399247-K
	3	2 to 5	399254-K	399255-K
	4	2	399248-K	399249-K
	6	2	399134-K	399135-K
†	1	2 to 11	399064-K	-----
JC	1	2 to 12	399150-JC	399151-JC
	2	2 to 6	399152-JC	399153-JC
	3	2 to 5	399444-JC	399445-JC
	5	2 to 3	399446-JC	399447-JC
	6	2	399154-JC	399155-JC
†	1	2 to 11	399066-JC	-----
H	1	2 to 11	399750-H	399751-H
	2	2 to 5	399752-H	399753-H
	3	2 to 3	-----	399767-H
	4	2	-----	399769-H
†	1	2 to 11	399068-H	-----
HC	1	2 to 11	399760-HC	399761-HC
	2	2 to 6	399764-HC	-----
	2	2 to 5	399762-HC	399763-HC
	†	1	399078-HC	-----
L	1	2 to 17	399172-L	399173-L
	†	1	399080-L	-----
MF	1	2 to 23	399180-MF	399181-MF
	†	1	399082-MF	-----

\* See page 6 for Section Diagrams.

† Notched Blade Sections. (See page 6 for layout)



# GENERAL PURPOSE SWITCHES

These switches are an economical addition to basic circuitry and are designed to handle lower voltage requirements.



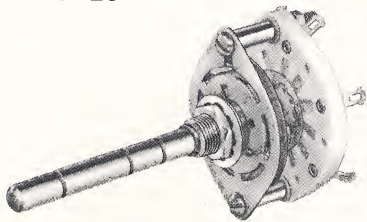
## STANDARD ROTATION CONSECUTIVE SHORTING

Nine active contacts, all open in full CCW position and progressively picked-up and shorted to common contact with CW rotation.

## OPPOSITE ROTATION CONSECUTIVE SHORTING

Nine active contacts, all shorted to common contact CCW position, and progressively opened and dropped with CW rotation.

## 60° SWITCHES



1 POLE  
6 POSITIONS  
60° THROW

### TYPE SWITCH "JC"

Total No. of Poles	No. of Positions	Poles Per Section	No. of Sections	Catalog No.	
				Shorting	Non-Shorting
1	2-10	1	1	399722-JC	—

### TYPE SWITCH "K"

1	2-10	1	1	399748-K	—
---	------	---	---	----------	---

### TYPE SWITCH "JC"

1	2-10	1	1	399720-JC	—
---	------	---	---	-----------	---

### TYPE SWITCH "K"

1	2-10	1	1	399746-K	—
---	------	---	---	----------	---

### 60° INDEXING SWITCHES (Ceramic)

1	2-6	1	1	—	399729-JC
2	2-6	1	2	—	399731-JC

### 60° INDEXING SWITCHES (Phenolic)

1	2-6	1	1	—	399747-K
2	2-6	1	2	—	399749-K

### 60° HAM SWITCH (Ceramic)

3	2-6	1	3	—	399581-HC
---	-----	---	---	---	-----------

## SPECIAL FUNCTION SECTIONS

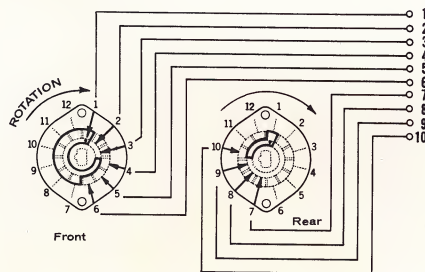
### CONSECUTIVE SHORTING FUNCTION

#### TYPES

399056-A

399438-JC

399252-K



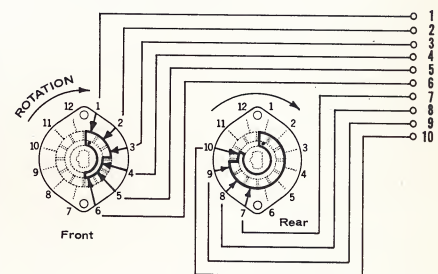
### OPPOSITE ROTATION

### CONSECUTIVE SHORTING FUNCTION

#### TYPES

399436-JC

399250-K

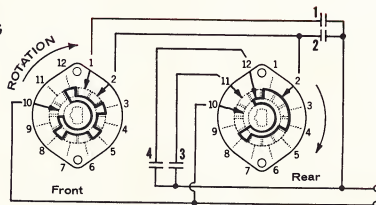


### CAPACITOR DECADE

#### TYPE A

399059-A

NON-SHORTING

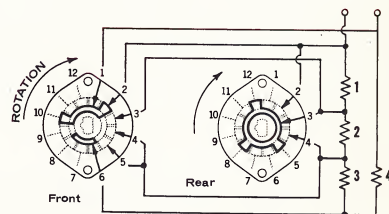


### RESISTOR DECADE

#### TYPE A

399057-A

NON-SHORTING

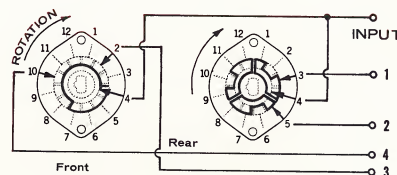


### BINARY CODED DECIMAL OUTPUT SWITCH

#### TYPE A

399061-A

NON-SHORTING







# OAK SWITCH HARDWARE

Hardware is listed for the convenience of design engineers to assist them in assembling switches. See page 4 of this catalog for shaft and index assemblies.

## TYPE "A" SWITCH HARDWARE

Complete hardware to build 5 1-section Switches. Consists of Spacers, Strut Screws, Washers, Nuts, Lockwashers, Stopwashers. Also, see page 4 for shafts and index assemblies. **Part No. 399960**

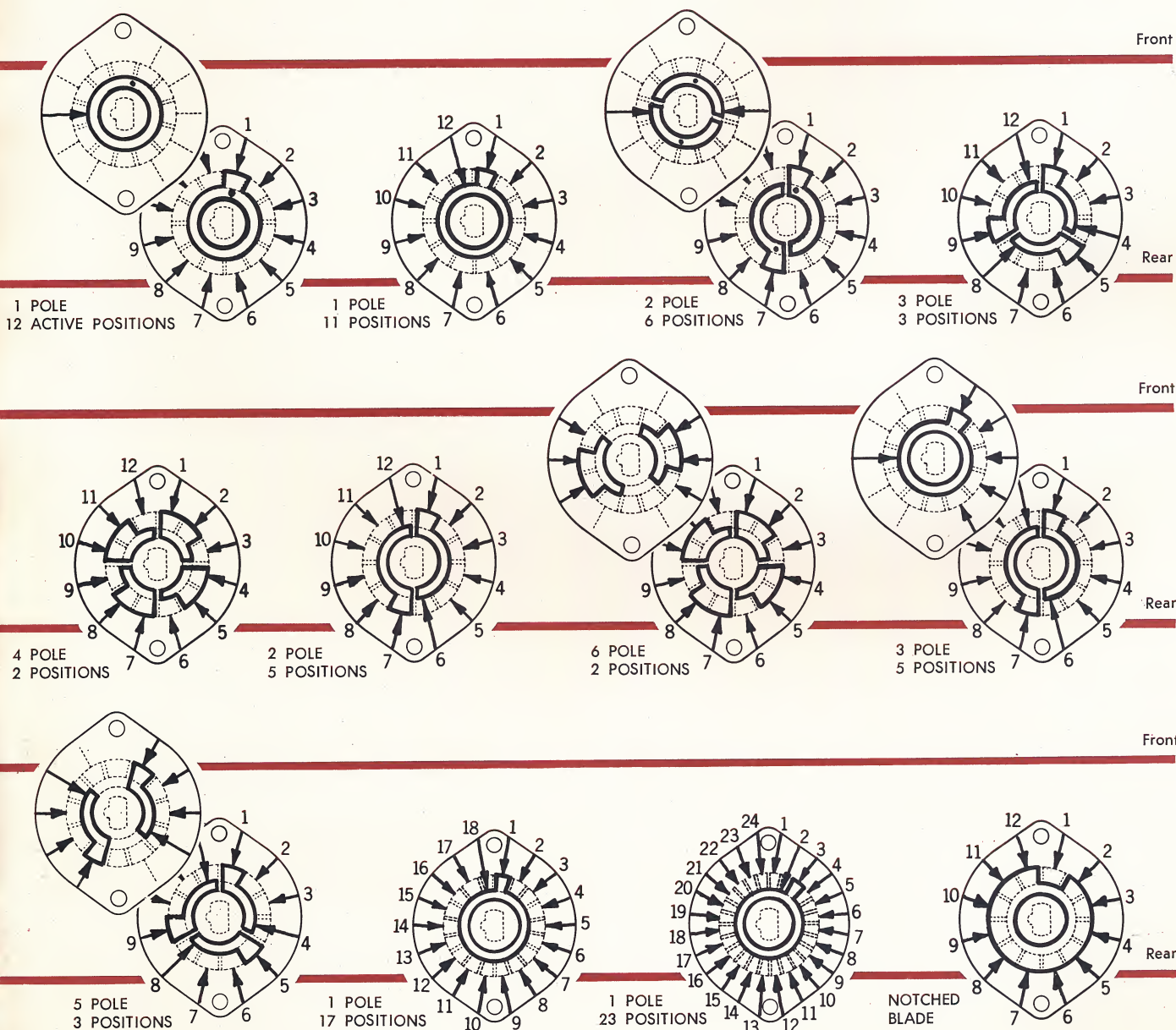
## TYPES "F", "FC", "JC" or "K" SWITCH HARDWARE

Complete hardware to build 5 1-section Switches. Consists of Spacers, Strut Screws, Washers, Nuts, Lockwashers, Stopwashers. Also, see page 4 for shafts and index assemblies. **Part No. 399961**

## TYPES "H", "HC", "L", or "MF" SWITCH HARDWARE

Complete hardware to build 5 1-section Switches. Consists of Spacers, Strut Screws, Washers, Nuts, Lockwashers, Stopwashers. Also, see page 4 for shafts and index assemblies. **Part No. 399962**

## STANDARD SWITCH SECTIONS



ONLY  
12 POSITION  
SHOWN



# OAK TYPE 130 PUSHBUTTON SWITCH



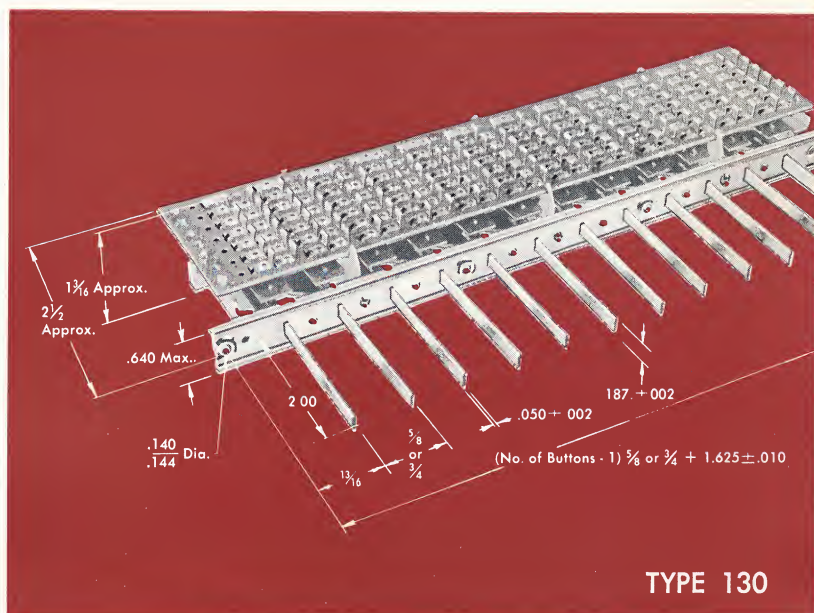
All 4 PDT per plunger. Choice of 2 to 12 Buttons. From 8 to 48 poles. Removable Latching Mechanism Permits Modification to Momentary Operation. 5/8 & 3/4 Button Spacing

New flexibility, greater design possibilities now available to engineers. Reliable Oak Type 130 switches formerly available only in custom switches can now be ordered off-the-shelf.

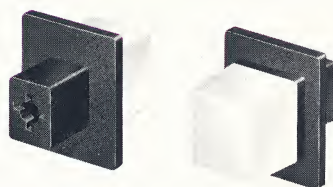
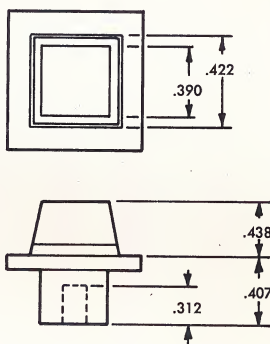
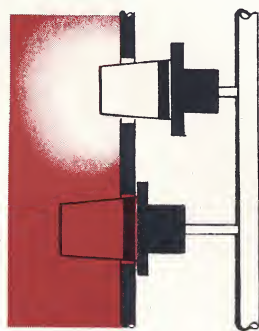
**UNIVERSAL** — In normal operation, all buttons are interlocked by a common latch bar. Depressing any button releases all other depressed or latched buttons. Any number of buttons may be depressed at once and will latch if depressed simultaneously. All push rods extend 2 inches from mounting surface, you may cut them shorter as required.

**CONTACTS** — Double wiping, with 30-millionths of an inch gold-plate. Rated, 1 amp. at 28 volts DC operation; 0.5 amp., 110 volts AC. Will carry 5 amps.

**INSULATION** — Highest grade of phenolic punching stock, conforming to MIL-P-3115 grade PBG. Slider insulators are grade PBE-P. Buttons not included. Order buttons below if required.



TYPE 130



DELUXE  
BUTTONS  
FOR TYPE 130  
SWITCH

No. Of Buttons	Total No. Of Poles	3/4" Button Catalog No.		5/8" Button Catalog No.	
		Shorting	Non-Shorting	Shorting	Non-Shorting
2	8	399850-130	399851-130	399872-130	399873-130
3	12		399853-130		399875-130
4	16	399854-130	399855-130	399876-130	399877-130
5	20		399857-130		399879-130
6	24	399858-130	399859-130	399880-130	399881-130
7	28		399861-130		399883-130
8	32	399862-130	399863-130	399884-130	399885-130
9	36		399865-130		399887-130
10	40	399866-130	399867-130	399888-130	399889-130
11	44		399869-130		399891-130
12	48	399870-130	399871-130	399892-130	399893-130

Lighting can be accomplished by flooding back of panel with light. Translucent portion of button will then illuminate when button is depressed. Sold in standard packs of 10 pushbuttons to a package only.

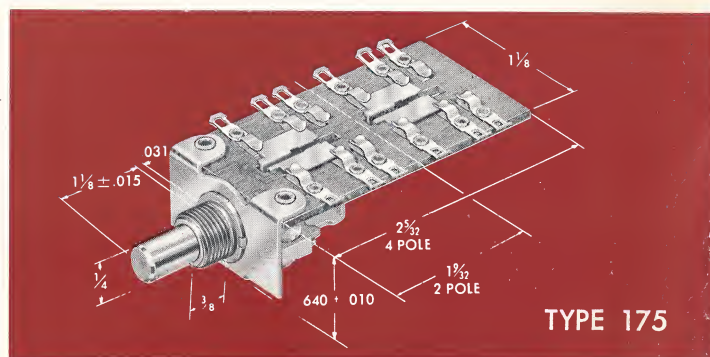
Catalog No. 399930-001

# OAK TYPE 175 PUSHBUTTON SWITCH

Shorting and Non-Shorting. 2 PDT; 6 Contacts. 4 PDT; 12 Contacts. Push-Push Latching.

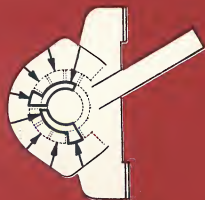
Designed for circuit applications requiring a single pushbutton switch with low contact resistance plus highest performance. Shaft length is 3/4", pushbutton travel is 3/8". Has double-wiping contacts, gold plated for long shelf life and easy soldering. Rated, 1 amp. at 28 volts DC operation; 0.5 amp., 110 volts AC. Will carry 5 amps.

Switch Function	No. Of Contacts	CATALOG NO.	
		Shorting	Non-Shorting
2 PDT	6	399810-175	399811-175
4 PDT	12	399812-175	399813-175



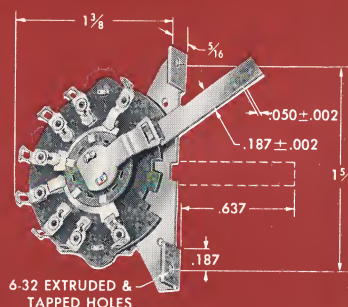
TYPE 175





TYPE SWITCHES  
399160-189  
399161-189

TYPE 189



## OAK TYPE 189 LEVER SWITCHES

Shorting & Non-Shorting. 2 Poles, 3 Positions.

Economy type lever switch made to Oak's fine quality standards and with the same ratings and construction details as other switches on these pages. Double wiping contacts. Single section. Gold-plated contacts.

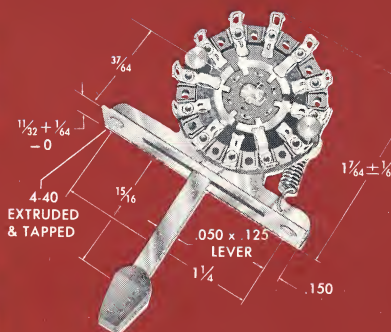
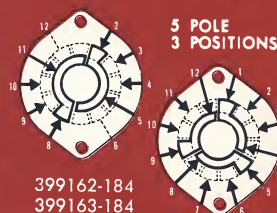
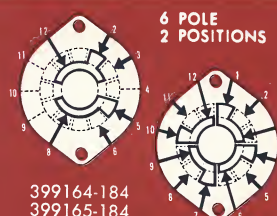
No. Of Poles	No. Of Positions	Type Of Indexing	CATALOG NO.	
			Shorting	Non-Shorting
2	3	Positive	399160-189	399161-189

## OAK TYPE 184 LEVER SWITCHES

Shorting & Non-Shorting. 5 & 6 Poles, 2 & 3 Positions.

New molded stator on Type 184 Lever Switch provides extra strength as well as adaptability to miniaturized circuitry. Long life and quality construction features of other Oak switches including double-wiping contacts. Electrical characteristics exceed the requirements of MIL-S-3786. Gold-plated contacts.

No. Of Poles	No. Of Positions	Type Of Indexing	CATALOG NO.	
			Shorting	Non-Shorting
5	3	Positive	399162-184	399163-184
6	2	Positive	399164-184	399165-184



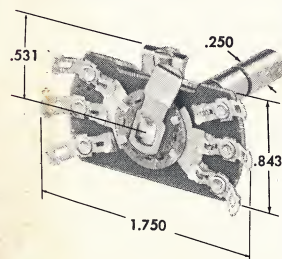
TYPE 184

## OAK 20 SERIES ROTARY SWITCHES

Shorting & Non-Shorting 1 & 2 Poles, 2-4 Positions.

This expanded line of economical switches will provide more flexibility and adaptability to your circuit design. Suitable for all light duty circuit switching such as radio-phono, stereo channel reversing, meters, speakers and related equipment.

Shaft 2 3/8" long. Grooved for break off at 3/4", 1 1/8" and 1 3/8" from the mounting surface.



No. Of Poles	No. Of Positions	Type Of Indexing	CATALOG NO.	
			Shorting	Non-Shorting
1	2	Positive	399190-23	
1	3	Positive	399192-27	
1	4	Positive	399196-29	399195-29
2	2	Positive	399194-22	
2	2	Spring Return Pos. 2 to 1		399197-22
2	3	Positive	399198-28	
2	3	Spring Return to Center	399188-28	399189-28

TYPE 23  
2 POSITIONS  
INSULATED ROTOR



399190-23

TYPE 22  
2 POSITIONS  
INSULATED ROTOR



399197-22  
399194-22

TYPE 27  
3 POSITIONS  
INSULATED ROTOR



399192-27

TYPE 28  
3 POSITIONS  
INSULATED ROTOR



399188-28  
399189-28  
399198-28

TYPE 29  
4 POSITIONS  
INSULATED ROTOR

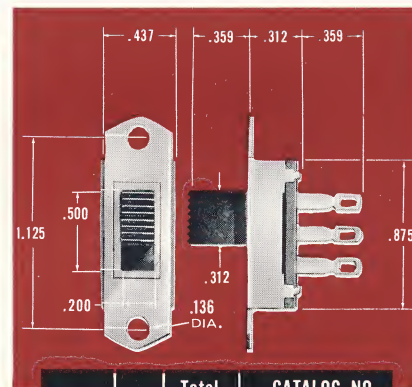


399196-29  
399195-29

## OAK 200 SERIES SLIDE SWITCHES

SPST-DPST-SPDT-DPDT 1 & 2 Poles, 2 to 6 Contacts.

30% narrower than ordinary slide switches, Gold-plated Double-Wiping contacts are self-cleaning and last longer. All slide switches rated 3 amps at 125 volts AC operation.



Switch Function	Poles	Total No. Of Contacts	CATALOG NO.
			Non-Shorting Only
SPST	1	2	399275-275
DPST	2	4	399276-276
SPDT	1	3	399277-277
DPDT	2	6	399278-278



OAK MANUFACTURING CO.

CRYSTAL LAKE, ILLINOIS 60014 • A DIVISION OF OAK ELECTRO/NETICS CORP

Telephone: 815-459-5000 TWX: 815-459-5628 CABLE ADDRESS: OAKMANCO





# OAK MANUFACTURING CO.

CRYSTAL LAKE, ILLINOIS 60014

A DIVISION OF OAK ELECTRO/NETICS CORP.

Effective

AUGUST, 1966

telephone: 815-459-5000 TWX: 815-459-5628 CABLE ADDRESS: OAKMANCO

## OAK AUTHORIZED DISTRIBUTORS-NATIONWIDE

This Listing supersedes all previously printed Oak Authorized Distributor Listings.

### ALABAMA

**AIRWORK CORPORATION**  
4809 Bradford Blvd.  
837-5790  
Huntsville, Alabama 35805

### ARKANSAS

**LAVENDER DISTRIBUTING CO.**  
520 E. Fourth St.  
TE 2-4195  
Texarkana, Ark. 75501

### CALIFORNIA

**MOULTON ELECTRONICS, INC.**  
1058 Terminal Way  
591-8292  
San Carlos, Calif. 94070

**NEWARK ELECTRONICS CO.**  
4747 W. Century Blvd.  
OR 8-0441  
Inglewood, Calif. 11901

**R. V. WEATHERFORD CO.**  
6921 San Fernando Road  
VI 9-3451  
Glendale, Calif. 91201

**R. V. WEATHERFORD CO.**  
3240 Hillview Ave.  
DA 1-5373  
Palo Alto, Calif. 94304

### COLORADO

**NEWARK-DENVER  
ELECTRONIC SUPPLY CO.**  
2170 S. Grape St.  
SK 7-3351  
Denver, Colorado 80222

### CONNECTICUT

**CONNECTOR-CORPORATION  
OF AMERICA**  
137 Hamilton Street  
624-0127  
New Haven, Connecticut 06504

### FLORIDA

**AIRWORK CORPORATION**  
P.O. Box 48-194  
885-2401  
Miami, Florida 33148

### FLORIDA (Continued)

**ELECTRONIC WHOLESALERS, INC.**  
P.O. Box 20214  
305/841-1550  
Orlando, Florida 32814

**ELECTRONIC WHOLESALERS, INC.**  
9390 N. W. 27th Ave.  
OX 6-1620  
Miami, Fla. 33159

### ILLINOIS

**NEWARK ELECTRONICS CORP.**  
500 N. Pulaski  
638-4411  
Chicago, Illinois 60624

### LOUISIANA

**ELECTRONIC PARTS CORP.**  
3622 Toulouse St.  
HU 6-3777  
New Orleans, La. 70119

### MARYLAND

**MILGRAY/WASHINGTON, INC.**  
5133 Lawrence Place  
UN 4-6330  
Hyattsville, Md. 20781

**WHOLESALE RADIO PARTS CO.**  
308 W. Redwood St.  
MU 5-2134  
Baltimore, Md. 21201

### MASSACHUSETTS

**DEMAMBRO ELECTRONICS**  
1095 Commonwealth Ave.  
AL 4-9000  
Boston, Mass. 02215

**RADIO SHACK CORP.**  
730 Commonwealth Ave.  
RE 4-6811  
Boston, Mass. 02215

### MINNESOTA

**HARRY STARK'S, INC.**  
112 - 3rd Ave., North  
FE 2-1325  
Minneapolis, Minn. 55401

### MISSOURI

**INTERSTATE INDUSTRIAL  
ELECTRONICS**  
2218 S. Jefferson Ave.  
314-PR 3-4990  
St. Louis, Missouri 63104

**RADIOLAB, INC.**  
1612 Grand Ave.  
HA 1-0171  
Kansas City, Mo. 64108

### NEW JERSEY

**FEDERATED PURCHASER, INC.**  
155 U.S. Route 22  
DR 6-8900  
Springfield, N. J. 07081

### NEW YORK

**FEDERAL ELECTRONICS, INC.**  
P.O. Box 1208, Vestal Parkway  
PI 8-8211  
Binghamton, N. Y. 13903

**MILGRAY ELECTRONICS, INC.**  
160 Varick St.  
YU 9-1600  
New York, N. Y. 10013

**MILO ELECTRONICS CORP.**  
530 Canal St.  
BE 3-2980  
New York, N. Y. 10013

**NEWARK-ELECTRONICS  
CENTER, INC.**  
160 Fifth Ave.  
AL 5-4600  
New York, N. Y. 10010

### NORTH CAROLINA

**ELECTRONIC WHOLESALERS, INC.**  
938 Burke St.  
725-8711  
Winston-Salem, N. C. 27101

### OHIO

**NEWARK-HERRLINGER  
ELECTRONICS CORP.**  
112 East Liberty St.  
Cincinnati, Ohio 45210

**W. M. PATTISON SUPPLY CO.**  
777 Rockwell St.  
P.O. Box 6178  
621-7320  
Cleveland, Ohio 44101

### OKLAHOMA

**S & S RADIO SUPPLY**  
537 S. Kenosha  
LU 2-7173  
Tulsa, Okla. 74120

### PENNSYLVANIA

**HERBACH & RADEMAN, INC.**  
1204 Arch St.  
LO 7-4309  
Philadelphia, Pa. 19107

**RADIO ELECTRIC SERVICE CO.**  
705 Arch St.  
WA 5-6900  
Philadelphia, Pa. 19106

### TEXAS

**ADAK ELECTRONIC CO.**  
708 Avenue H, East  
P.O. Box 391  
AN 4-1668 (Dallas)  
CR 4-5551 (Ft. Worth)  
Arlington, Texas 76010

**HARRISON EQUIPMENT CO., INC.**  
1422 San Jacinto  
P.O. Box 3268  
CA 4-9131  
Houston, Texas 77001

### UTAH

**BALLARD SUPPLY CO.**  
3109 Washington Blvd.  
EX 4-5541  
Ogden, Utah 84401

### WASHINGTON

**RADAR ELECTRIC**  
168 Western Avenue, West  
AT 2-2511  
Seattle, Washington 98119



# OAK DISTRIBUTOR SWITCHES

SUGGESTED RESALE PRICES—APRIL, 1966

OAK CATALOG NO.	LIST PRICE	SUGGESTED RESALE PRICES					
		1-4	5-9	10-24	25-49	50-99	100-249

## TYPE "A" SWITCH

399216-A	\$ 9.00	\$ 5.40	\$ 4.50	\$ 4.05	\$ 3.85	\$ 3.60	\$ 3.24
399217-A	9.00	5.40	4.50	4.05	3.85	3.60	3.24
399218-A	11.50	6.90	5.75	5.18	4.92	4.60	4.14
399219-A	11.50	6.90	5.75	5.18	4.92	4.60	4.14
399220-A	14.00	8.70	7.25	6.53	6.20	5.80	5.22
399221-A	14.00	8.70	7.25	6.53	6.20	5.80	5.22
399222-A	9.00	5.40	4.50	4.05	3.85	3.60	3.24
399223-A	9.00	5.40	4.50	4.05	3.85	3.60	3.24
399224-A	11.50	6.90	5.75	5.18	4.92	4.60	4.14
399225-A	11.50	6.90	5.75	5.18	4.92	4.60	4.14
399226-A	14.00	8.70	7.25	6.53	6.20	5.80	5.22
399227-A	14.00	8.70	7.25	6.53	6.20	5.80	5.22
399234-A	9.00	5.40	4.50	4.05	3.85	3.60	3.24
399235-A	9.00	5.40	4.50	4.05	3.85	3.60	3.24
399236-A	11.50	6.90	5.75	5.18	4.92	4.60	4.14
399237-A	11.50	6.90	5.75	5.18	4.92	4.60	4.14

## TYPE "F" SWITCH

399322-F	\$ 4.40	\$ 2.64	\$ 2.20	\$ 1.98	\$ 1.88	\$ 1.76	\$ 1.58
399323-F	4.40	2.64	2.20	1.98	1.88	1.76	1.58
399324-F	5.30	3.18	2.65	2.39	2.27	2.12	1.91
399325-F	5.30	3.18	2.65	2.39	2.27	2.12	1.91
399326-F	4.40	2.64	2.20	1.98	1.88	1.76	1.58
399327-F	4.40	2.64	2.20	1.98	1.88	1.76	1.58
399328-F	5.30	3.18	2.65	2.39	2.27	2.12	1.91
399329-F	5.30	3.18	2.65	2.39	2.27	2.12	1.91
399330-F	4.40	2.64	2.20	1.98	1.88	1.76	1.58
399331-F	4.40	2.64	2.20	1.98	1.88	1.76	1.58
399332-F	5.30	3.18	2.65	2.39	2.27	2.12	1.91
399333-F	5.30	3.18	2.65	2.39	2.27	2.12	1.91
399334-F	4.40	2.64	2.20	1.98	1.88	1.76	1.58
399335-F	4.40	2.64	2.20	1.98	1.88	1.76	1.58
399336-F	5.30	3.18	2.65	2.39	2.27	2.12	1.91
399337-F	5.30	3.18	2.65	2.39	2.27	2.12	1.91

## TYPE "FC" SWITCH

399366-FC	\$ 4.90	\$ 2.94	\$ 2.45	\$ 2.21	\$ 2.10	\$ 1.96	\$ 1.76
399367-FC	4.90	2.94	2.45	2.21	2.10	1.96	1.76
399368-FC	6.95	4.17	3.48	3.13	2.97	2.78	2.50
399369-FC	6.95	4.17	3.48	3.13	2.97	2.78	2.50
399370-FC	4.90	2.94	2.45	2.21	2.10	1.96	1.76
399371-FC	4.90	2.94	2.45	2.21	2.10	1.96	1.76
399372-FC	6.95	4.17	3.48	3.13	2.97	2.78	2.50
399373-FC	6.95	4.17	3.48	3.13	2.97	2.78	2.50
399374-FC	4.90	2.94	2.45	2.21	2.10	1.96	1.76
399375-FC	4.90	2.94	2.45	2.21	2.10	1.96	1.76
399376-FC	6.95	4.17	3.48	3.13	2.97	2.78	2.50
399377-FC	6.95	4.17	3.48	3.13	2.97	2.78	2.50
399378-FC	4.90	2.94	2.45	2.21	2.10	1.96	1.76
399379-FC	4.90	2.94	2.45	2.21	2.10	1.96	1.76
399380-FC	6.95	4.17	3.48	3.13	2.97	2.78	2.50
399381-FC	6.95	4.17	3.48	3.13	2.97	2.78	2.50

## TYPE "K" SWITCH

399418-K	\$ 3.10	\$ 1.86	\$ 1.55	\$ 1.40	\$ 1.33	\$ 1.24	\$ 1.12
399419-K	3.10	1.86	1.55	1.40	1.33	1.24	1.12
399420-K	4.45	2.67	2.28	2.05	1.95	1.78	1.60
399421-K	4.45	2.67	2.28	2.05	1.95	1.78	1.60

OAK CATALOG NO.	LIST PRICE	SUGGESTED RESALE PRICES					
		1-4	5-9	10-24	25-49	50-99	100-249

## TYPE "K" SWITCH

399422-K	\$ 5.60	\$ 3.36	\$ 2.80	\$ 2.52	\$ 2.39	\$ 2.24	\$ 2.02
399423-K	5.60	3.36	2.80	2.52	2.39	2.24	2.02
399424-K	6.60	3.96	3.30	2.97	2.82	2.64	2.38
399425-K	6.60	3.96	3.30	2.97	2.82	2.64	2.38
399736-K	9.00	5.40	4.50	4.05	3.87	3.60	3.33
399737-K	9.00	5.40	4.50	4.05	3.87	3.60	3.33
399732-K	7.80	4.68	3.90	3.51	3.35	3.12	2.89
399733-K	7.80	4.68	3.90	3.51	3.35	3.12	2.89
399426-K	3.10	1.86	1.55	1.40	1.33	1.24	1.12
399427-K	3.10	1.86	1.55	1.40	1.33	1.24	1.12
399428-K	4.45	2.67	2.28	2.05	1.95	1.78	1.60
399429-K	4.45	2.67	2.28	2.05	1.95	1.78	1.60
399430-K	5.60	3.36	2.80	2.52	2.39	2.24	2.02
399431-K	5.60	3.36	2.80	2.52	2.39	2.24	2.02
399432-K	3.10	1.86	1.55	1.40	1.33	1.24	1.12
399433-K	3.10	1.86	1.55	1.40	1.33	1.24	1.12
399434-K	4.45	2.67	2.28	2.05	1.95	1.78	1.60
399435-K	4.45	2.67	2.28	2.05	1.95	1.78	1.60
399744-K	9.00	5.40	4.50	4.05	3.87	3.60	3.33
399745-K	9.00	5.40	4.50	4.05	3.87	3.60	3.33
399742-K	7.80	4.68	3.90	3.52	3.35	3.12	2.89
399743-K	7.80	4.68	3.90	3.52	3.35	3.12	2.89
399738-K	6.60	3.96	3.30	2.97	2.82	2.64	2.38
399739-K	6.60	3.96	3.30	2.97	2.82	2.64	2.38
399734-K	4.45	2.67	2.28	2.05	1.95	1.78	1.60
399735-K	4.45	2.67	2.28	2.05	1.95	1.78	1.60
399740-K	5.60	3.36	2.80	2.52	2.39	2.24	2.02
399741-K	5.60	3.36	2.80	2.52	2.39	2.24	2.02
399490-K	5.50	3.30	2.75	2.52	2.38	2.20	2.04
399491-K	5.50	3.30	2.75	2.52	2.38	2.20	2.04
399492-K	5.50	3.30	2.75	2.52	2.38	2.20	2.04
399493-K	5.50	3.30	2.75	2.52	2.38	2.20	2.04
399494-K	6.60	3.96	3.30	3.04	2.84	2.64	2.44
399495-K	6.60	3.96	3.30	3.04	2.84	2.64	2.44

## TYPE "JC" SWITCH

399468-JC	\$ 4.10	\$ 2.46	\$ 2.05	\$ 1.85	\$ 1.76	\$ 1.64	\$ 1.48
399469-JC	4.10	2.46	2.05	1.85	1.76	1.64	1.48
399470-JC	5.90	3.54	2.95	2.66	2.53	2.36	2.12
399471-JC	5.90	3.54	2.95	2.66	2.53	2.36	2.12
399472-JC	7.50	4.50	3.75	3.38	3.21	3.00	2.70
399473-JC	7.50	4.50	3.75	3.38	3.21	3.00	2.70
399474-JC	9.00	5.40	4.50	4.05	3.85	3.60	3.24
399475-JC	9.00	5.40	4.50	4.05	3.85	3.60	3.24
399476-JC	4.10	2.46	2.05	1.85	1.76	1.64	1.48
399477-JC	4.10	2.46	2.05	1.85	1.76	1.64	1.48
399478-JC	5.90	3.54	2.95	2.66	2.53	2.36	2.12
399479-JC	5.90	3.54	2.95	2.66	2.53	2.36	2.12
399480-JC	7.50	4.50	3.75	3.38	3.21	3.00	2.70
399481-JC	7.50	4.50	3.75	3.38	3.21	3.00	2.70
399706-JC	8.90	5.33	4.45	4.00	3.82	3.56	3.29
399707-JC	8.90	5.33	4.45	4.00	3.82	3.56	3.29
399712-JC	10.85	5.53	4.62	4.15	3.97	3.69	3.40
399713-JC	10.85	5.53	4.62	4.15	3.97	3.69	3.40
399714-JC	12.60	7.57	6.30	5.67	5.42	5.03	4.66
399715-JC	12.60	7.57	6.30	5.67	5.42	5.03	4.66
399704-JC	4.10	2.46	2.05	1.85	1.76	1.64	1.52
399705-JC	4.10	2.46	2.05	1.85	1.76	1.64	1.52
399708-JC	7.50	4.50	3.75	3.38	3.21	3.00	2.70



OAK CATALOG NO.	LIST PRICE	SUGGESTED RESALE PRICES					
		1-4	5-9	10-24	25-49	50-99	100-249

#### TYPE "JC" SWITCH

399709-JC	\$ 7.50	\$ 4.50	\$ 3.75	\$ 3.38	\$ 3.21	\$ 3.00	\$ 2.70
399710-JC	5.90	3.54	2.95	2.66	2.53	2.36	2.12
399711-JC	5.90	3.54	2.95	2.66	2.53	2.36	2.12
399716-JC	8.19	4.90	4.10	3.68	3.52	3.27	3.03
399717-JC	8.19	4.90	4.10	3.68	3.52	3.27	3.03
399484-JC	4.10	2.46	2.05	1.85	1.76	1.64	1.48
399485-JC	4.10	2.46	2.05	1.85	1.76	1.64	1.48
399486-JC	5.90	3.54	2.95	2.66	2.53	2.36	2.12
399487-JC	5.90	3.54	2.95	2.66	2.53	2.36	2.12
399718-JC	8.19	4.90	4.10	3.68	3.52	3.27	3.03
399719-JC	8.19	4.90	4.10	3.68	3.52	3.27	3.03
399696-JC	5.90	3.54	2.95	2.72	2.54	2.36	2.18
399697-JC	5.90	3.54	2.95	2.72	2.54	2.36	2.18
399698-JC	9.00	5.40	4.50	4.15	3.87	3.60	3.33
399699-JC	9.00	5.40	4.50	4.15	3.87	3.60	3.33

#### TYPE "H" SWITCH

399512-H	\$ 4.40	\$ 2.64	\$ 2.20	\$ 1.98	\$ 1.88	\$ 1.76	\$ 1.58
399513-H	4.40	2.64	2.20	1.98	1.88	1.76	1.58
399514-H	5.30	3.18	2.65	2.39	2.27	2.12	1.91
399515-H	5.30	3.18	2.65	2.39	2.27	2.12	1.91
399516-H	6.75	4.05	3.88	3.49	3.32	2.70	2.43
399517-H	6.75	4.05	3.88	3.49	3.32	2.70	2.43
399529-H	7.86	4.71	3.93	3.54	3.36	3.14	2.83
399518-H	4.40	2.64	2.20	1.98	1.88	1.76	1.58
399519-H	4.40	2.64	2.20	1.98	1.88	1.76	1.58
399520-H	5.30	3.18	2.65	2.39	2.27	2.12	1.91
399521-H	5.30	3.18	2.65	2.39	2.27	2.12	1.91
399522-H	6.75	4.05	3.88	3.49	3.32	2.70	2.43
399523-H	6.75	4.05	3.88	3.49	3.32	2.70	2.43
399525-H	4.37	2.62	2.19	1.97	1.87	1.75	1.57
399527-H	5.30	3.18	2.65	2.39	2.28	2.12	1.92

#### TYPE "HC" SWITCH

399562-HC	\$ 4.90	\$ 2.94	\$ 2.45	\$ 2.21	\$ 2.10	\$ 1.96	\$ 1.76
399563-HC	4.90	2.94	2.45	2.21	2.10	1.96	1.76
399564-HC	6.95	4.17	3.48	3.13	2.97	2.78	2.50
399565-HC	6.95	4.17	3.48	3.13	2.97	2.78	2.50
399566-HC	8.95	5.37	4.48	4.03	3.83	3.58	3.22
399567-HC	8.95	5.37	4.48	4.03	3.83	3.58	3.22
399574-HC	4.90	2.94	2.45	2.21	2.10	1.96	1.76
399568-HC	4.90	2.94	2.45	2.21	2.10	1.96	1.76
399569-HC	4.90	2.94	2.45	2.21	2.10	1.96	1.76
399570-HC	6.95	4.17	3.48	3.13	2.97	2.78	2.50
399571-HC	6.95	4.17	3.48	3.13	2.97	2.78	2.50
399572-HC	8.95	5.37	4.48	4.03	3.83	3.58	3.22
399573-HC	8.95	5.37	4.48	4.03	3.83	3.58	3.22

#### TYPE "L" SWITCH

399608-L	\$ 3.90	\$ 2.34	\$ 1.95	\$ 1.76	\$ 1.67	\$ 1.56	\$ 1.40
399609-L	3.90	2.34	1.95	1.76	1.67	1.56	1.40
399610-L	5.60	3.36	2.80	2.52	2.39	2.24	2.02
399611-L	5.60	3.36	2.80	2.52	2.39	2.24	2.02
399612-L	7.30	4.38	3.65	3.29	3.13	2.92	2.63
399613-L	7.30	4.38	3.65	3.29	3.13	2.92	2.63
399614-L	8.25	4.95	4.03	3.63	3.45	3.30	2.97
399615-L	8.25	4.95	4.03	3.63	3.45	3.30	2.97

#### TYPE "MF" SWITCH

399658-MF	\$ 4.20	\$ 2.52	\$ 2.10	\$ 1.89	\$ 1.80	\$ 1.68	\$ 1.51
399659-MF	4.20	2.52	2.10	1.89	1.80	1.68	1.51
399660-MF	6.00	3.60	3.00	2.70	2.57	2.40	2.16
399661-MF	6.00	3.60	3.00	2.70	2.57	2.40	2.16
399662-MF	7.85	4.71	3.93	3.54	3.36	3.14	2.83
399663-MF	7.85	4.71	3.93	3.54	3.36	3.14	2.83
399664-MF	8.90	5.34	4.45	4.01	3.81	3.56	3.20
399665-MF	8.90	5.34	4.45	4.01	3.81	3.56	3.20

OAK CATALOG NO.	LIST PRICE	SUGGESTED RESALE PRICES					
		1-4	5-9	10-24	25-49	50-99	100-249

## SPECIAL 200-HOUR SALT SPRAY REQUIREMENT TYPES

399240-A	\$ 9.50	\$ 5.70	\$ 4.75	\$ 4.28	\$ 4.07	\$ 3.80	\$ 3.42
399241-A	9.50	5.70	4.75	4.28	4.07	3.80	3.42

399338-F	\$ 5.40	\$ 3.24	\$ 2.70	\$ 2.43	\$ 2.31	\$ 2.16	\$ 1.94
399339-F	5.40	3.24	2.70	2.43	2.31	2.16	1.94

399382-FC	\$ 5.90	\$ 3.54	\$ 2.95	\$ 2.66	\$ 2.53	\$ 2.36	\$ 2.12
399383-FC	5.90	3.54	2.95	2.66	2.53	2.36	2.12

399724-JC	\$ 8.19	\$ 4.90	\$ 4.10	\$ 3.68	\$ 3.52	\$ 3.27	\$ 3.03
399725-JC	8.19	4.90	4.10	3.68	3.52	3.27	3.03

## HARDWARE

399960 TYPE A	\$10.10	\$ 6.24	\$ 5.59	\$ 5.20	\$ 4.68	\$ 4.16	\$ 3.62
399961 TYPES F, FC, JC, K	24.20	14.40	12.90	12.00	10.80	9.60	8.70
399962 TYPES H, HC, L, MF	22.60	13.44	12.04	11.20	10.08	8.96	8.12

## SPECIAL FUNCTION SWITCHES

399720-JC	\$ 3.60	\$ 2.16	\$ 1.80	\$ 1.62	\$ 1.54	\$ 1.44	\$ 1.30
399746-K	3.10	1.86	1.55	1.40	1.33	1.24	1.12
399722-JC	3.60	2.16	1.80	1.62	1.54	1.44	1.30
399748-K	3.10	1.86	1.55	1.40	1.33	1.24	1.12

## 60° SWITCHES

399729-JC	\$ 3.60	\$ 2.16	\$ 1.80	\$ 1.62	\$ 1.54	\$ 1.44	\$ 1.30
399731-JC	5.10	3.05	2.58	2.33	2.22	2.07	1.87
399747-K	3.10	1.86	1.55	1.40	1.33	1.24	1.12
399749-K	4.40	2.64	2.20	1.98	1.88	1.76	1.58
399581-HC	7.25	4.37	3.65	3.29	3.13	2.93	2.64



## SECTIONS

OAK CATALOG NO.	LIST PRICE	SUGGESTED RESALE PRICES					
		1-4	5-9	10-24	25-49	50-99	100-249
399032-A	\$ 5.15	\$ 3.09	\$ 2.58	\$ 2.32	\$ 2.20	\$ 2.06	\$ 1.85
399033-A	5.15	3.09	2.58	2.32	2.20	2.06	1.85
399034-A	5.15	3.09	2.58	2.32	2.20	2.06	1.85
399035-A	5.15	3.09	2.58	2.32	2.20	2.06	1.85
399036-A	5.15	3.09	2.58	2.32	2.20	2.06	1.85
399037-A	5.15	3.09	2.58	2.32	2.20	2.06	1.85

399070-F	1.85	1.11	.93	.84	.80	.74	.67
399071-F	1.85	1.11	.93	.84	.80	.74	.67
399072-F	1.85	1.11	.93	.84	.80	.74	.67
399073-F	1.85	1.11	.93	.84	.80	.74	.67
399074-F	1.85	1.11	.93	.84	.80	.74	.67
399075-F	1.85	1.11	.93	.84	.80	.74	.67
399076-F	1.85	1.11	.93	.84	.80	.74	.67
399077-F	1.85	1.11	.93	.84	.80	.74	.67

399090-FC	2.35	1.41	1.18	1.06	1.01	.94	.85
399091-FC	2.35	1.41	1.18	1.06	1.01	.94	.85
399092-FC	2.35	1.41	1.18	1.06	1.01	.94	.85
399093-FC	2.35	1.41	1.18	1.06	1.01	.94	.85
399094-FC	2.35	1.41	1.18	1.06	1.01	.94	.85
399095-FC	2.35	1.41	1.18	1.06	1.01	.94	.85
399096-FC	2.35	1.41	1.18	1.06	1.01	.94	.85
399097-FC	2.35	1.41	1.18	1.06	1.01	.94	.85

399130-K	1.50	.90	.75	.68	.65	.60	.59
399131-K	1.50	.90	.75	.68	.65	.60	.59
399242-K	1.50	.90	.75	.68	.65	.60	.59
399243-K	1.50	.90	.75	.68	.65	.60	.59
399132-K	1.50	.90	.75	.68	.65	.60	.59
399133-K	1.50	.90	.75	.68	.65	.60	.59
399244-K	1.50	.90	.75	.68	.65	.60	.59
399245-K	1.50	.90	.75	.68	.65	.60	.59
399246-K	1.50	.90	.75	.68	.65	.60	.59
399247-K	1.50	.90	.75	.68	.65	.60	.59
399248-K	1.50	.90	.75	.68	.65	.60	.59
399249-K	1.50	.90	.75	.68	.65	.60	.59
399134-K	1.50	.90	.75	.68	.65	.60	.59
399135-K	1.50	.90	.75	.68	.65	.60	.59
399254-K	1.50	.90	.75	.69	.65	.60	.56
399255-K	1.50	.90	.75	.69	.65	.60	.56

399150-JC	2.10	1.26	1.05	.95	.90	.84	.76
399151-JC	2.10	1.26	1.05	.95	.90	.84	.76
399152-JC	2.10	1.26	1.05	.95	.90	.84	.76
399153-JC	2.10	1.26	1.05	.95	.90	.84	.76
399444-JC	2.10	1.26	1.05	.95	.90	.84	.76
399445-JC	2.10	1.26	1.05	.95	.90	.84	.76
399446-JC	2.10	1.26	1.05	.95	.90	.84	.76
399447-JC	2.10	1.26	1.05	.95	.90	.84	.76
399154-JC	2.10	1.26	1.05	.95	.90	.84	.76
399155-JC	2.10	1.26	1.05	.95	.90	.84	.76

399750-H	1.85	1.11	.93	.84	.80	.74	.67
399751-H	1.85	1.11	.93	.84	.80	.74	.67
399752-H	1.85	1.11	.93	.84	.80	.74	.67
399753-H	1.85	1.11	.93	.84	.80	.74	.67
399767-H	1.85	1.11	.93	.84	.80	.74	.67
399769-H	1.85	1.11	.93	.84	.80	.74	.67

399760-HC	2.35	1.41	1.18	1.06	1.01	.94	.84
399761-HC	2.35	1.41	1.18	1.06	1.01	.94	.84
399764-HC	2.35	1.41	1.18	1.06	1.01	.94	.84
399762-HC	2.35	1.41	1.18	1.06	1.01	.94	.84
399763-HC	2.35	1.41	1.18	1.06	1.01	.94	.84

OAK CATALOG NO.	LIST PRICE	SUGGESTED RESALE PRICES					
		1-4	5-9	10-24	25-49	50-99	100-249
399172-L	\$ 1.90	\$ 1.14	\$ .95	\$ .86	\$ .82	\$ .76	\$ .69
399173-L	1.90	1.14	.95	.86	.82	.76	.69

399180-MF	2.00	1.20	1.00	.90	.85	.80	.72
399181-MF	2.00	1.20	1.00	.90	.85	.80	.72

## NOTCHED SECTIONS

399058-A	\$ 3.50	\$ 2.10	\$ 1.75	\$ 1.58	\$ 1.50	\$ 1.40	\$ 1.26
399060-F	2.60	1.56	1.30	1.17	1.11	1.04	.94
399062-FC	3.50	2.10	1.75	1.58	1.50	1.40	1.26
399064-K	2.25	1.35	1.13	1.02	.97	.90	.81
399066-JC	3.10	1.86	1.55	1.40	1.33	1.24	1.12
399068-H	2.75	1.65	1.38	1.24	1.18	1.10	.99
399078-HC	3.50	2.10	1.75	1.58	1.50	1.40	1.26
399080-L	2.85	1.71	1.43	1.29	1.23	1.14	1.03
399082-MF	3.00	1.80	1.50	1.35	1.28	1.20	1.08

## SPECIAL FUNCTION SECTIONS

399056-A	\$ 3.50	\$ 2.10	\$ 1.75	\$ 1.58	\$ 1.50	\$ 1.40	\$ 1.26
399438-JC	2.10	1.26	1.05	.95	.90	.84	.76
399252-K	1.50	.90	.75	.68	.65	.60	.54
399436-JC	2.10	1.26	1.05	.95	.90	.84	.76
399250-K	1.50	.90	.75	.68	.65	.60	.54
399059-A	3.50	2.10	1.75	1.58	1.50	1.40	1.26
399057-A	3.50	2.10	1.75	1.58	1.50	1.40	1.26
399061-A	3.50	2.10	1.75	1.58	1.50	1.40	1.26

## SHAFT & INDEX ASSEMBLIES

399029-A	\$ 3.75	\$ 2.25	\$ 1.88	\$ 1.69	\$ 1.60	\$ 1.50	\$ 1.35
399022-A	5.00	3.00	2.50	2.25	2.14	2.00	1.80
399039-F,FC	2.60	1.56	1.30	1.17	1.11	1.04	.94
399021-F,FC	4.15	2.49	2.08	1.88	1.79	1.66	1.50
399043-K,JC	2.40	1.44	1.20	1.08	1.03	.96	.86
399024-K,JC	3.95	2.37	1.98	1.78	1.69	1.58	1.42
399785-H,HC	2.85	1.71	1.43	1.29	1.23	1.14	1.03
399023-H,HC	4.40	2.64	2.20	1.98	1.88	1.76	1.59
399789-L	3.00	1.80	1.50	1.35	1.28	1.20	1.08
399025-L	4.55	2.73	2.28	2.06	1.96	1.82	1.64
399793-MF	3.25	1.95	1.63	1.47	1.40	1.30	1.17
399026-MF	4.80	2.88	2.40	2.16	2.06	1.92	1.73



## TYPE 130 PUSHBUTTON

OAK CATALOG NO.	LIST PRICE	1-9	10-24	25-49	50-99	100-249
399850-130	\$ 9.10	\$ 4.86	\$ 4.05	\$ 3.24	\$ 2.75	\$2.11
399851-130	9.10	4.86	4.05	3.24	2.75	2.11
399853-130	10.90	6.54	5.45	4.36	3.71	2.83
399854-130	13.60	8.16	6.80	5.44	4.62	3.54
399855-130	13.60	8.16	6.80	5.44	4.62	3.54
399857-130	16.66	9.99	8.33	6.66	5.66	4.33
399858-130	19.50	11.70	9.75	7.80	6.63	5.07
399859-130	19.50	11.70	9.75	7.80	6.63	5.07
399861-130	22.63	13.41	11.18	8.94	7.60	5.81
399862-130	25.16	15.09	12.58	10.06	8.55	6.54
399863-130	25.16	15.09	12.58	10.06	8.55	6.54
399865-130	28.60	17.16	14.30	11.44	9.72	7.44
399866-130	31.46	18.87	15.73	12.58	10.69	8.18
399867-130	31.46	18.87	15.73	12.58	10.69	8.18
399869-130	35.26	21.15	17.63	14.10	11.99	9.16
399870-130	37.80	22.68	18.90	15.12	12.85	9.82
399871-130	37.80	22.68	18.90	15.12	12.85	9.82
399872-130	9.10	4.86	4.05	3.24	2.75	2.11
399873-130	9.10	4.86	4.05	3.24	2.75	2.11
399875-130	10.90	6.54	5.45	4.36	3.71	2.83
399876-130	13.60	8.16	6.80	5.44	4.62	3.54
399877-130	13.60	8.16	6.80	5.44	4.62	3.54
399879-130	16.66	9.99	8.33	6.66	5.66	4.33
399880-130	19.50	11.70	9.75	7.80	6.63	5.07
399881-130	19.50	11.70	9.75	7.80	6.63	5.07
399883-130	22.63	13.41	11.18	8.94	7.60	5.81
399884-130	25.16	15.09	12.58	10.06	8.55	6.54
399885-130	25.16	15.09	12.58	10.06	8.55	6.54
399887-130	28.60	17.16	14.30	11.44	9.72	7.44
399888-130	31.46	18.87	15.73	12.58	10.69	8.18
399889-130	31.46	18.87	15.73	12.58	10.69	8.18
399891-130	35.26	21.15	17.63	14.10	11.99	9.16
399892-130	37.80	22.68	18.90	15.12	12.85	9.82
399893-130	37.80	22.68	18.90	15.12	12.85	9.82

Deluxe Pushbuttons not supplied as part of switch, order separately.  
399930-001 .18 each, net. (Packed 10 per package.)

## TYPE 175 PUSHBUTTON

OAK CATALOG NO.	LIST PRICE	1-4	5-9	10-24	25-49	50-99	100-249
399810-175	\$ 4.36	\$ 2.63	\$ 2.18	\$ 1.91	\$ 1.84	\$ 1.72	\$ 1.13
399811-175	4.36	2.63	2.18	1.91	1.84	1.72	1.13
399812-175	4.98	3.01	2.49	2.19	2.11	1.98	1.29
399813-175	4.98	3.01	2.49	2.19	2.11	1.98	1.29

## TYPE 189 LEVER SWITCHES

OAK CATALOG NO.	LIST PRICE	1-4	5-9	10-24	25-49	50-99	100-249
399160-189	\$ 2.20	\$ 1.31	\$ 1.10	\$ 1.00	\$ .95	\$ .89	\$ .85
399161-189	2.20	1.31	1.10	1.00	.95	.89	.85

## TYPE 184 LEVER SWITCHES

OAK CATALOG NO.	LIST PRICE	1-4	5-9	10-24	25-49	50-99	100-249
399162-184	\$ 8.18	\$ 4.94	\$ 4.09	\$ 3.60	\$ 3.45	\$ 2.82	\$ 1.83
399163-184	\$ 8.18	\$ 4.94	\$ 4.09	\$ 3.60	\$ 3.45	\$ 2.82	\$ 1.83
399164-184	8.12	4.90	4.06	3.57	3.43	3.22	2.10
399165-184	8.12	4.90	4.06	3.57	3.43	3.22	2.10

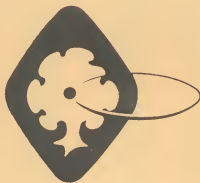
## OAK 20 SERIES SWITCHES

OAK CATALOG NO.	LIST PRICE	1-4	5-9	10-24	25-49	50-99	100-249
399188-28	\$ 3.44	\$ 2.04	\$ 1.72	\$ 1.55	\$ 1.48	\$ 1.39	\$ 1.26
399189-28	3.44	2.04	1.72	1.55	1.48	1.39	1.26
399190-23	1.90	1.13	.95	.86	.82	.77	.70
399192-27	1.90	1.13	.95	.86	.82	.77	.70
399194-22	1.90	1.13	.95	.86	.82	.77	.70
399195-29	1.90	1.13	.95	.86	.82	.77	.70
399196-29	1.90	1.13	.95	.86	.82	.77	.70
399197-22	1.90	1.13	.95	.86	.82	.77	.70
399198-28	1.90	1.13	.95	.86	.82	.77	.70

## OAK 200 SERIES SLIDE SWITCHES

Sold and Packed 25 per box

OAK CATALOG NO.	LIST PRICE	1-99	100-249
399275-275	\$ .26	\$ .155	\$ .144
399276-276	.35	.21	.19
399277-277	.26	.155	.144
399278-278	.35	.21	.19



OAK MANUFACTURING CO.

A DIVISION OF OAK ELECTRO/NETICS CORP

CRYSTAL LAKE, ILLINOIS 60014

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